CERVICAL CANCER
STRUCTURED REPORTING PROTOCOL
(1st Edition 2013)

Core Document versions:

- World Health Organization Classification of Tumours Pathology and Genetics of Tumours of the Breast and Female Genital Organs (2003).
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First published: November 2013, 1st Edition (Version 1.0)
Disclaimer

The Royal College of Pathologists of Australasia ("College") has developed these protocols as an educational tool to assist pathologists in reporting of relevant information for specific cancers. While each protocol includes "standards" and "guidelines" which are indicators of ‘minimum requirements’ and ‘recommendations’, the protocols are a first edition and have not been through a full cycle of use, review and refinement. Therefore, in this edition, the inclusion of “standards” and “guidelines” in each document are provided as an indication of the opinion of the relevant expert authoring group, but should not be regarded as definitive or as widely accepted peer professional opinion. The use of these standards and guidelines is subject to the clinician’s judgement in each individual case.

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### Contents

Scope .......................................................................................................................... 5

Abbreviations ........................................................................................................... 6

Definitions ............................................................................................................... 7

Introduction ............................................................................................................. 10

Authority and development .................................................................................... 12

1 Pre-analytical ........................................................................................................ 15

2 Specimen handling in the laboratory ................................................................. 17

3 Microscopic findings .......................................................................................... 30

4 Ancillary studies findings .................................................................................... 40

5 Synthesis and overview ....................................................................................... 41

6 Structured checklist ............................................................................................ 43

7 Formatting of pathology reports .......................................................................... 59

Appendix 1 Pathology request information and surgical handling procedures ............... 60

Appendix 2 Guidelines for formatting of a pathology report ....................................... 64

Appendix 3 Example pathology report for cervical cancer ........................................ 66

Appendix 4 WHO histological classification of tumours of the uterine cervix .............. 68

Appendix 5 FIGO Cancer staging ........................................................................... 70

Appendix 6 Descriptive terminology ...................................................................... 71

References ............................................................................................................... 72
Scope

Structured reporting systems are typically applied in the setting of an excised organ or radical excision specimen. In early stage cervical carcinoma limited surgery may be sufficient for therapeutic as well as diagnostic purposes. In late stage cervical carcinoma, radiotherapy and chemotherapy may be chosen as primary treatment. Therefore surgery for cervical carcinoma is not infrequently limited in extent.

It is considered important that guidelines for the reporting of cervical carcinoma encompass the spectrum of surgical specimens obtained in treatment of cervical carcinoma. Specifically this document applies to cone biopsy, radical trachelectomy and hysterectomy specimens. Associated staging specimens including lymphadenectomy are also included.

Long loop excision of transformation zone (LLETZ) specimens are performed for diagnosis and treatment of cervical dysplasia and not in known cases of cervical carcinoma. LLETZ specimens would typically be handled in a different macroscopic manner than a resection specimen for known carcinoma. In the setting of unexpected carcinoma in a LLETZ specimen, the majority of the components in this document could be readily applied and the use of structured reporting in this setting would be strongly encouraged.

Pelvic exenteration specimens are not specifically included in this document. Pelvic exenteration specimens are now exceptionally rare in the primary treatment of cervical carcinoma. Cervical carcinomas FIGO stage 2A and greater are unlikely to be surgically resected\(^1\), and are managed in most cases with chemotherapy and radiotherapy. Pelvic exenteration is generally now only performed for recurrent disease and is rarely performed as primary surgery. Whilst pelvic exenteration is not specifically addressed in this document, the structured report outlined in this document could be readily adapted to be used for exenteration specimens.

Smaller biopsies such as target cervical biopsies are not included in this document.

This protocol is specifically written for the reporting of carcinoma.
# Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AIS</td>
<td>Adenocarcinoma in situ</td>
</tr>
<tr>
<td>AJCC</td>
<td>American Joint Committee on Cancer</td>
</tr>
<tr>
<td>CIN</td>
<td>Cervical intraepithelial neoplasia</td>
</tr>
<tr>
<td>FIGO</td>
<td>Federation Internationale de Gynecologie et d'Obstétrique (International Federation of Obstetricians and Gynecologists)</td>
</tr>
<tr>
<td>IHC</td>
<td>Immunohistochemical tests on formalin fixed tissues</td>
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<tr>
<td>LVSI</td>
<td>Lymphovascular invasion by neoplastic cells</td>
</tr>
<tr>
<td>PET</td>
<td>Positron emission tomography</td>
</tr>
<tr>
<td>PBS</td>
<td>Pharmaceutical Benefits Scheme</td>
</tr>
<tr>
<td>SCC</td>
<td>Squamous cell carcinoma</td>
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<tr>
<td>TNM</td>
<td>Tumour–node–metastasis</td>
</tr>
<tr>
<td>UICC</td>
<td>Union Internationale Contre le Cancer (International Union Against Cancer)</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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Definitions

The table below provides definitions for general or technical terms used in this protocol. Readers should take particular note of the definitions for ‘standard’, ‘guideline’ and ‘commentary’, because these form the basis of the protocol.

Ancillary study
An ancillary study is any pathology investigation that may form part of a cancer pathology report but is not part of routine histological assessment.

Clinical information
Patient information required to inform pathological assessment, usually provided with the specimen request form. Also referred to as ‘pretest information’.

Commentary
Commentary is text, diagrams or photographs that clarify the standards (see below) and guidelines (see below), provide examples and help with interpretation, where necessary (not every standard or guideline has commentary).

Commentary is used to:

- define the way an item should be reported, to foster reproducibility
- explain why an item is included (eg how does the item assist with clinical management or prognosis of the specific cancer).
- cite published evidence in support of the standard or guideline
- clearly state any exceptions to a standard or guideline.

In this document, commentary is prefixed with ‘CS’ (for commentary on a standard) or ‘CG’ (for commentary on a guideline), numbered to be consistent with the relevant standard or guideline, and with sequential alphabetic lettering within each set of commentaries (eg CS1.01a, CG2.05b).

General commentary
General commentary is text that is not associated with a specific standard or guideline. It is used:

- to provide a brief introduction to a chapter, if necessary
- for items that are not standards or guidelines but are included in the protocol as items of potential importance, for which there is currently insufficient evidence to recommend their inclusion. (Note: in future reviews of protocols, such items may be reclassified as either standards or guidelines, in line with diagnostic and prognostic advances, following evidentiary review).
| **Guideline** | Guidelines are recommendations; they are not mandatory, as indicated by the use of the word ‘should’. Guidelines cover items that are not essential for clinical management, staging or prognosis of a cancer, but are recommended. Guidelines include key observational and interpretative findings that are fundamental to the diagnosis and conclusion. Such findings are essential from a clinical governance perspective, because they provide a clear, evidentiary decision-making trail. Guidelines are not used for research items. In this document, guidelines are prefixed with ‘G’ and numbered consecutively within each chapter (eg G1.10). |
| **Macroscopic findings** | Measurements, or assessment of a biopsy specimen made by the unaided eye. |
| **Microscopic findings** | In this document, the term ‘microscopic findings’ refers to histo-morphological assessment |
| **Predictive factor** | A predictive factor is a measurement that is associated with response or lack of response to a particular therapy. |
| **Prognostic factor** | A prognostic factor is a measurement that is associated with clinical outcome in the absence of therapy or with the application of a standard therapy. It can be thought of as a measure of the natural history of the disease. |
| **Standard** | Standards are mandatory, as indicated by the use of the term ‘must’. Their use is reserved for core items essential for the clinical management, staging or prognosis of the cancer and key information (including observations and interpretation) which is fundamental to the diagnosis and conclusion. These elements must be recorded and at the discretion of the pathologist included in the pathology report according to the needs of the recipient of the report. The summation of all standards represents the minimum dataset for the cancer. In this document, standards are prefixed with ‘S’ and numbered consecutively within each chapter (eg S1.02). |
| **Structured report** | A report format which utilizes standard headings, definitions and nomenclature with required information. |
| **Synoptic report** | A structured report in condensed form (as a synopsis or precis). |
Synthesis

Synthesis is the process in which two or more pre-existing elements are combined, resulting in the formation of something new.

The Oxford dictionary defines synthesis as “the combination of components or elements to form a connected whole”.

In the context of structured pathology reporting, synthesis represents the integration and interpretation of information from two or more modalities to derive new information.
Introduction

Cancer of the cervix

Cervical carcinoma remains an important cause of morbidity and mortality in women and has a high emotional and financial burden, affecting a younger age group than many of the more common gynaecological malignancies. In many countries cervical screening programs have had an enormous impact on the incidence of cervical carcinoma. There has been a relative increase in observed adenocarcinomas relative to squamous cell carcinoma. The future should see a significant impact of the human papilloma virus (HPV) vaccine in decreasing the incidence of both adenocarcinoma and squamous cell carcinoma.

This document aims to highlight the core elements clinicians require from pathologists to manage carcinoma of the cervix. Difficult areas in the reporting of cervical carcinomas are discussed, including terminology in early stage carcinoma with limited invasion, methods of measuring tumour size, and depth of invasion. Measurement of tumour size in cases of multiple foci of invasion is also discussed. It is worthy of note, however, that some of these issues currently remain incompletely resolved, including at an international level. The authors of the The Lower Anogenital Squamous Terminology Standardization Project for HPV-Associated Lesions (LAST study) state that measurement of depth, definitions of horizontal/lateral extent, and measurements in the presence of multifocality of carcinoma remain to be addressed in future publications. An updated edition of the WHO tumors of female genital organs is scheduled for publication in 2014.

Importance of histopathological reporting

The information contained within a pathology report for cervical carcinoma includes prognostic information for the patient and treating clinical team. The content will assist in subsequent management, whether this may be surveillance, further surgery, radiotherapy or chemotherapy, or a combination of these modalities. The essential elements include the depth of invasion, the size of the carcinoma, blood vessel or lymphatic involvement, margin assessment, involvement of lymph nodes and other structures. The histological subtype of tumour may define an appropriate therapeutic pathway. It is important, for example to identify tumours showing neuroendocrine differentiation.

Benefits of structured reporting

Structured pathology reports with standardised definitions for each component have been shown to significantly enhance the completeness and quality of data provided to clinicians, and have been recommended both in North America and the United Kingdom. The College of American Pathologists and the Royal College of Pathologists (UK) have published useful protocols for the reporting of cancer. A protocol for the management of cervical cancer and endorsed by the Royal College of Pathologists of Australasia and other Australasian organisations is timely.

Use of a structured reporting format facilitates consistent and comprehensive reports, allows easy extraction of the necessary information and ensures that no critical data are omitted.
Design of this protocol

This structured reporting protocol provides a complete framework for the assessment and documentation of all the pathological features of cervical cancers.

Mandatory elements (standards) are differentiated from those that are not mandatory but are recommended (guidelines). It is anticipated that some of the pathological features included under guidelines will become standards in the future as our knowledge base increases. Consistency and speed of reporting is improved by the use of discrete data elements recorded from the checklist. However, the pathologist is encouraged to include free text or narrative to document any other relevant issues, to give reasons for coming to a particular opinion, to explain any points of uncertainty and to avoid any ambiguity.

The structure provided by the following chapters, headings and subheadings describes the elements of information and their groupings, but does not necessarily represent the format of either a pathology report (Chapter 7) or checklist (Chapter 6). These, and the structured pathology request form (Appendix 1) are templates that represent information from this protocol, organised and formatted differently to suit different purposes.

Key documents

- Guidelines for Authors of Structured Cancer Pathology Reporting Protocol, Royal College of Pathologists of Australasia, 2009
- The Pathology Request-Test-Report Cycle — Guidelines for Requesters and Pathology Providers, Royal College of Pathologists of Australasia, 2004
- AJCC Cancer Staging Manual 7th edition, American Joint Committee on Cancer 2010
- Tumours of the Breast and Female Genital Organs. Pathology and Genetics, World Health Organization Classification of Tumours, eds Tavassoli FA, Devilee P. 2003. IARC Press, Lyon, France
- Berek and Hacker’s Gynecologic Oncology, 5th edition. Walters Kluwer health/Lippincott Williams & Wilkins. 2010

Updates since last edition

Not applicable
Authority and development

This section provides details of the committee involved in developing this protocol and the process by which it was developed.

Protocol developers

This protocol was developed by an expert committee, with assistance from relevant stakeholders.

Expert group

Protocol development committee for Cervical Cancer

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Acknowledgements

The Gynaecological Cancer Expert Committee wishes to thank all the pathologists and clinicians who contributed to the discussion around this document.
Stakeholders

ACT Health
Anatomical Pathology Advisory Committee (APAC)
Australian Association of Pathology Practices Inc (AAPP)
Australian Cancer Network
Australian Commission on Safety and Quality in Health Care
Australian Society of Clinical Oncologists (ASCO)
Australian Society of Colposcopy and Cervical pathology (ASCCP)
Australian Society of Cytology (ASC)
Australian Society of Gynaecologic Oncologists (ASGO)
Cancer Australia
Cancer Council ACT
Cancer Council NSW
Cancer Council Queensland
Cancer Council SA
Cancer Council Tasmania
Cancer Council Victoria
Cancer Council Victoria Clinical Network
Cancer Council Western Australia
Cancer Institute NSW
Cancer Services Advisory Committee (CanSAC)
Cancer Voices
Clinical Oncology Society of Australia (COSA)
Department of Health and Ageing
Grampians Integrated Cancer Services (GICS)
Health Informatics Society of Australia (HISA)
Independent Review Group of Pathologists
International Federation of Obstetricians and Gynecologists (FIGO)
International Gynecological Cancer Society (IGCS)
Medical Software Industry Association (MSIA)
National Breast and Ovarian Cancer Centre (NBOCC)
National Coalition of Public Pathology (NCOPP)
National E-Health Transition Authority (NEHTA)
National Pathology Accreditation Advisory Council (NPAAC)
National Round Table Working Party for Structured Pathology Reporting of Cancer.
New Zealand Guidelines Group (NZGG)
NSW Department of Health
Peter MacCallum Cancer Institute
Queensland Cooperative Oncology Group (QCOG)
Representatives from laboratories specialising in anatomical pathology across Australia
Royal Australasian College of Physicians (RACP)
Southern Cancer Network, Christchurch, New Zealand
Southern Melbourne Integrated Cancer Service (SMICS)
Standards Australia
The Medical Oncology Group of Australia
The Royal Australasian College of Surgeons (RACS)
The Royal Australian and New Zealand College of Obstetricians & Gynaecologists (RANZCOG)
The Royal Australian and New Zealand College of Radiologists (RANZCR)
The Royal Australian College of General Practitioners (RACGP)
The Royal College of Pathologists of Australasia (RCPA)
Western Australia Clinical Oncology Group (WACOG)

Secretariat
Meagan Judge, Royal College of Pathologists of Australasia.

Development process
This protocol has been developed following the seven-step process set out in Guidelines for Authors of Structured Cancer Pathology Reporting Protocols.11

Where no reference is provided, the authority is the consensus of the expert group.
1 Pre-analytical

This chapter relates to information that should be recorded on receipt of the specimen in the laboratory.

The pathologist is reliant on the quality of information received from the clinicians or requestor. Some of this information may be received in generic pathology request forms; however, the additional information required by the pathologist specifically for the reporting of cervical cancers is outlined in Appendix 1. Appendix 1 also includes a standardised request information sheet that may be useful in obtaining all relevant information from the requestor.

Surgical handling procedures affect the quality of the specimen and recommendations for appropriate surgical handling are included in Appendix 1.

S1.01 All demographic information provided on the request form and with the specimen must be recorded.

CS1.01a The Royal College of Pathologists of Australasia (RCPA) The Pathology Request-Test-Report Cycle — Guidelines for Requesters and Pathology Providers\(^{12}\) must be adhered to. This document specifies the minimum information to be provided by the requesting clinician for any pathology test.

CS1.01b In support of a government initiative to monitor the health of indigenous Australians particularly in relation to cancer, the patient’s ethnicity must be recorded, if known. In particular whether the patient is of aboriginal or Torres Strait islander origin.

CS1.01c The patient’s health identifiers may include the patient’s Medical Record Number as well as a national health number such as a patient’s Medicare number (Australia), Individual Healthcare Identifier (IHI) (Australia) or the National Healthcare Identifier (New Zealand).

S1.02 All clinical information as documented on the request form must be recorded verbatim.

CS1.02a The request information may be recorded as a single text (narrative) field or it may be recorded in a structured format.

S1.03 The pathology accession number of the specimen must be recorded.

S1.04 The principal clinician involved in the patient’s care and responsible for investigating the patient must be recorded.

CS1.04a It is important that the reporting pathologist should be able to communicate with the managing clinician for clarification for a number of reasons:

- The clinical assessment and staging may be
incomplete at the time of procedure.

- The pathology request is often authored by the clinician performing the procedure rather than the clinician who is investigating and managing the patient.
- The identity of this clinician is often not indicated on the pathology request form

G1.01 Any clinical information received in other communications from the requestor or other clinician should be recorded together with the source of that information.
2 Specimen handling in the laboratory

This chapter relates to the procedures required after the information has been handed over from the requesting clinician and the specimen has been received in the laboratory.

Specimen handling in the laboratory

- Pathologists may be asked to provide tissue samples from fresh specimens for tissue banking or research purposes. The decision to provide tissue should only be made when the pathologist is sure that the diagnostic process including the measurement of maximum depth of invasion and other important parameters that influence patient prognosis and management will not be compromised. As a safeguard, research use of the specimen may be put on hold until the diagnostic process is complete so that the specimen can be retrieved.

- The specimen must be handled in a systematic and thorough fashion to ensure completeness and accuracy of pathological data.

- The type of specimen must be recorded.
  - State whether the specimen is a cone, radical trachelectomy, hysterectomy, radical hysterectomy, +/- lymph nodes, and record any other accompanying specimens.

Cone Biopsy

- Orientate the specimen.
  - It is customary for a cone biopsy to be orientated with a suture denoting 12 o’clock.

- Differentially ink anterior and posterior surfaces of the cone biopsy (single ink will suffice if not orientated).

- The specimen may be received fresh, or formalin-fixed.
  - If received fixed, it is strongly advised to serially section the cone in a sagittal plane, at 2-3mm intervals, with each slice placed in a separate block and clearly designated (see figure 1a below).
  - If received fresh, the specimen may be formalin-fixed immediately, and then handled as above. Alternatively, if preferred, a fresh cone biopsy may be orientated, inked, and opened longitudinally (in the lateral position, usually at 3 o’clock), and pinned on a specimen board (mucosal side up) and fixed in formalin before cutting the entire cervix by making parallel sections, 2-3mm apart, along the plane of the
endocervical canal. Sections should be taken in a fashion that the epithelium is present in each section (see figure 1b below).

- It is not advisable to longitudinally open a cervical cone that has already been formalin fixed.
- Three hours minimum fixation time is recommended prior to cutting.\textsuperscript{15-16}
- Slices can typically be submitted each in an individual cassette, however, if the cone biopsy is unusually high (long), the superior and inferior portions may need to be submitted in separate cassettes (ie – composite sections may be used).

Whichever method is used, all tissue must be submitted for histology, in as many tissue blocks as is required.\textsuperscript{15-16}
Figure 1a  A suggested method for sectioning formalin-fixed cone biopsy specimens

Note: In the figure above the slices are labelled left to right (9 o’clock to 3 o’clock). As the cone has been orientated with a suture, it may be differentially inked for orientation of margins. Each slice is blocked separately, with composite blocks used (anterior and posterior) when slices are too large for one cassette (eg central cone, as demonstrated in composite blocks D/E, F/G).
Figure 1b  A method for sectioning fresh cone biopsy specimens
**Radical trachelectomy**

Radical trachelectomy is a form of radical surgery for the treatment of early cervical cancer, offered to a selected subset of young patients with favourable cervical tumours and a desire to maintain fertility.\(^{17,18}\)

The procedure may be performed vaginally or abdominally, and a pelvic lymphadenectomy is performed, as a part of the surgical procedure.\(^1,18\)

Irrespective of the technique employed, the surgical specimen comprises upper vaginal cuff, cervix, parametrium and lymph nodes.\(^{17-18}\)

- **The specimen must be widely sampled. All tissue from the endocervical margin, parametrial and nodal tissue is submitted for histology.**
  - The specimen may be handled in a variety of ways, as long as all prognostic information is obtainable by the method used. Typically the entire specimen is submitted.

- The suggested method of handling for a formalin-fixed specimen is as follows (also see Figures 2a and b below): Orientate and differentially ink the specimen, including the broad endocervical margin. The peripheral portion of the parametria are removed, leaving a small amount proximally attached to the main specimen and step sectioned, with the end-pieces placed in a separate cassette. The central portion of the main specimen is handled identically to the formalin-fixed cone, with the entire cervical canal being sagittally sectioned, including 12 and 6 o’clock margins. Tissue from the 3 and 9 o’clock poles of the specimen are transected, and serially sectioned in a coronal plane, along with a small amount of proximal parametrium to ensure detailed examination of these margins (Figures 2a and b below). Usually slices will need to be submitted as superior and inferior portions in separate casettes (ie – composite sections are often used, due to the specimen length / height, and presence of additional vaginal cuff tissue).

- Alternatively, if received fresh the specimen could be opened longitudinally at 3 o’clock after orientation and differential inking of margins. The specimen is then pinned to a board (mucosal side facing up) and fixed (as per protocol for unfixed cone biopsy).\(^19\) Once fixed, the parametria are removed and step sectioned, with the end-pieces placed in a separate cassette. The main specimen is handled identically to an opened cone.
Figure 2a  Radical trachelectomy – anterior view

(a) Remove peripheral portion of the parametrium leaving a small amount attached to the main specimen proximally.

(b) Vaginal cuff shaded

Figure 2b  Radical trachelectomy from above – suggested sectioning for fixed radical trachelectomy

Right parametrium removed and sectioned.  Left parametrium removed and sectioned.
Simple hysterectomy

- A simple hysterectomy specimen may be opened laterally and pinned out into anterior and posterior halves as per radical hysterectomy specimen (see below). However, if a simple hysterectomy has been performed following a LLETZ or cone biopsy, it may be preferable due to possible cervical stenosis, to amputate the cervix from the specimen through the upper endocervical canal, and handle the amputated cervix according to the protocol of a fixed cone biopsy (figure 1a). In this case, the entire cervix should be submitted to assess for residual carcinoma.

- If carcinoma has been found incidentally in a simple hysterectomy, in the routinely taken sections, it is advisable to return to the specimen, attempt to reconstruct it, and process as required to provide maximal pathological information.

Radical hysterectomy

- The tumour and margins must be adequately and appropriately sampled such that all required prognostic information may be obtained from the description, and histologic examination of the selected blocks.
  - There are a variety of acceptable methods for the macroscopic handling of these specimens, and handling is often guided by:
    - Whether the specimen has been received fresh or fixed
    - Whether the tumour is macroscopically visible
    - Size of macroscopic tumour
    - Single or multiple tumours previously identified
    - Macroscopic relationship of tumour to margins

- The specimen may be weighed.

- **Orientate the specimen.**

- Ink the resection surfaces of the specimen from the vaginal cuff up to the peritoneal reflections.
  - Inking of the parametrium is sometimes useful if definition of the true surgical margins is necessary.15

- The specimen may be received fresh or formalin fixed.

- If the specimen is received fresh or even partially fixed, it is preferable to open and pin out the entire specimen as anterior and posterior halves, leaving the cervix attached and carefully pinned (mucosal side up) as well. Also pin out any parametrial attachments.
  - This allows thorough macroscopic assessment of the tumour.

- If there is a preference to amputate the cervix (for example if the state of the specimen is such that opening may cause fragmentation, such as
if there is distortion by previous LLETZ or cone biopsy) then the vaginal cuff and parametrium should be left intact, and pinned out without further slicing. Once fixed the amputated cervix will be sectioned in the same manner as a fixed radical trachelectomy (figures 2b and 3c). Open the uterine corpus into anterior and posterior halves and pin these out as well, with the mucosal surface facing upwards.

- For any form of radical specimen, please note that if the vaginal cuff is small, this is best submitted as part of the cervical sections. If the vaginal margin is large, separate representative radial sections should be submitted.

- Parametrial tissues would usually be present in radical specimens and should be entirely processed for histologic examination. If minimal parametrial tissue is present (for example in simple hysterectomy), then a shave of the lateral myometrial margins should be submitted, to ensure that the vascular margin is sampled.

- Sections from the uterine corpus will usually be similar to those for a routine benign uterus, as long as there is no endometrial tumour. Blocks should be directed at defining the upper extent of the cervical tumour and additional sampling of the isthmic region may be required to assess this.9,15-16,20

- If the tumour is macroscopically small then the entire tumour should be submitted for histological examination (figure 3a).

If the tumour is not macroscopically visible, then the entire cervix typically requires submission for histologic examination.

- If the tumour is macroscopically large, representative sections should be taken including:
  - Full-face of tumour
  - Longitudinal extent of tumour
  - Deepest point of invasion
  - All quadrants
  - Relationship of tumour to margins in sagittal and coronal plane.

**All lymph nodes are to be processed for histologic examination.**

- Any remaining fat accompanying the specimen should also be processed.
  - There may be small lymph nodes within the fat which are not macroscopically identified.21-22
  - Identifying all lymph nodes present in the specimen is important, both to allow their histological evaluation for metastases, and also as a measurement of adequacy of nodal dissection.

- Larger lymph nodes should be sliced at 2-3mm intervals. If sliced, do not process multiple nodes in the same cassette, unless inked different colours, so they can be individually identified for accurate nodal count.
Handling of lymph nodes is the same, irrespective of the accompanying type of cervical specimen.

Sentinel lymph node biopsy is an emerging procedure in the management of women with early-stage cervical cancer (in patients with a low risk of lymph node metastases), but is not universally practiced.9,23-24

Intra-operative frozen section may be requested on pelvic lymph nodes, especially for patients undergoing radical trachelectomy. This is particularly the case in centres where PET scanning is not readily available.17

**Figure 3a** Radical hysterectomy – received fresh, opened, divided and pinned out. Tumour in anterior half.
Figure 3b  Radical hysterectomy – received fresh, lateral view

Blocks must incorporate the deepest point of invasion and the thickness of the cervical wall in the maximal area of invasion. a = radial stromal margin measurement

Figure 3c  Radical hysterectomy – alternative method, if received formalin fixed.

For blocking fixed amputated cervix, refer to protocol for fixed radical trachelectomy (Figure 2b)
Macroscopic findings

S2.01 All measurements are in SI units.

S2.02 Record specimen labelling.

S2.03 The location of orientating markers must be recorded.

G2.01 The external appearance of the specimen should be recorded.

CG2.01a Either in the fresh state, or after fixation, a standard macroscopic description should be made.

S2.04 The measurements of the specimen must be recorded.

CS2.04a In cone biopsy and radical trachelectomy specimens the length of the specimen, the length of the canal, and diameter of the ectocervix in 3-9 o’clock and 6-12 o’clock planes must be recorded.

CS2.04b For hysterectomy and radical hysterectomy specimens, standard measurements of the specimen must be recorded.

G2.02 A standard description of the rest of the uterus, and accompanying organs/tissues should be made.

S2.05 The presence of, and appearance of macroscopically evident tumour must be recorded.

CS2.05a This includes the number of visible tumours. If tumour is not macroscopically visible, this should be recorded.

CS2.05b In hysterectomy specimens, patients who have had a previous resection (LLETZ or cone biopsy) may not have macroscopic residual disease in the surgical specimen.

G2.03 For each tumour(s) the location in each plane within the cervix should be recorded: ectocervix/endocervix and radially (preferably clock-face designation).

S2.06 For each macroscopically visible tumour the size in two dimensions must be recorded.

G2.04 For each tumour the appearance of the tumour, including exophytic or endophytic appearance should be recorded.

S2.07 For each tumour, the tumour thickness and cervical wall thickness at the deepest point of invasion must be recorded.

CS2.07a The term thickness has been used in the macroscopic section. Depth of invasion is discussed in the microscopic section of this document. Point of tumour origin is required for invasive depth which would not typically be macroscopically recognised. The macroscopic measurement of thickness may assist in giving an
indication of general size and extent of the tumour.

CS2.07b For exophytic tumours, this is recorded from the surface of the tumour to the deepest point of invasion (refer to Figure 4).

CS2.07c In radical specimens this may be recorded as a fraction where the tumour depth is the numerator, and cervical wall thickness is the denominator (mm/mm). Some centres use this when calculating the Gynecologic Oncology Group (GOG) score.25

Figure 4 Fractional measurement of a tumour with an exophytic component

![Fractional measurement diagram]

a = tumour depth of invasion
b = cervical wall thickness at invasive tumour
c = radial stromal margin measurement

S2.08 The closest distance of the tumour(s) from the surgical resection margins of the specimen must be recorded.

CS2.08a For cone biopsy refer to Figure 5 below.
Figure 5  Example of tumour margin measurements as pertaining to cone biopsy.

a = measurement of endocervical margin  
b = measurement of ectocervical margin  
c – measurement of radial stromal margin

G2.05 If multiple tumours are macroscopically visible, record the distance between tumours, and outermost span of the tumours.

S2.09 Any macroscopic invasion into the body of the uterus, vaginal cuff, or parametrium or other organs or tissues must be recorded.

CS2.09a Whilst typically clinically recognised, pathological confirmation of involvement of the vaginal cuff and parametrium is important. Corpus involvement provides prognostic information.\textsuperscript{26}

S2.10 The nature and site of all blocks must be recorded.

S2.11 The site (including laterality) and macroscopic number of lymph nodes identified, and macroscopic impression of involvement by tumour must be recorded.\textsuperscript{15}

G2.06 A descriptive or narrative field should be provided to record any macroscopic information that is not recorded in the above standards and guidelines, and that would normally form part of the macroscopic description.

CG2.06a The traditional macroscopic narrative recorded at the time of specimen dissection is often reported separately from the cancer dataset. Although this remains an option, it is recommended that macroscopic information be recorded within the overall structure of this protocol.

CG2.06b Much of the information recorded in a traditional macroscopic narrative is covered in the standards and guidelines above and in many cases, no further description is required.
3 Microscopic findings

Microscopic findings relate purely to histological assessment. Information derived from multiple investigational modalities, or from two or more chapters in this protocol is described in Chapter 5.

S3.01 The presence of multiple tumours must be recorded.

CS3.01a Multiple tumours are uncommon except in stage 1A disease. Documentation is important to assist in establishing accurate tumour measurements.

S3.02 The histological tumour types must be recorded for each tumour.

CS3.02a The WHO classification should be used. (Refer to Appendix 4)

CS3.02b Tumour type may affect management and prognosis. Documentation of neuroendocrine differentiation has prognostic and therapeutic implications. Chemotherapy may be considered in the treatment regimen.4

G3.01 Subtyping of the carcinoma should be performed.

CG3.01a Some variants of carcinoma may have prognostic implications. These include small cell (neuroendocrine) carcinoma, clear cell carcinoma, and serous carcinoma.27

Whilst it has been traditional to subtype squamous cell carcinoma based on keratinisation, this is not of prognostic importance.28

S3.03 Histological tumour grade for adenocarcinoma must be recorded.

CS3.03a The suggested grading system is using a three tiered system:

- Well differentiated (grade 1)
- Moderately differentiated (grade 2)
- Poorly differentiated (grade 3)

CS3.03b The grading of adenocarcinoma is based on the degree of solid and glandular components, and the cytological nuclear grade. Useful guidelines to define grading parameters are as follows and can be found in several references.29,30,31 For well differentiated tumours there is 10% or less of solid growth, the glands are well formed and regular, nuclei are regular with minimal stratification and mitoses are infrequent. In poorly differentiated tumours there is over 50% solid growth and the cells are large with pleomorphic nuclei. Moderately differentiated tumours are intermediate between grades 1 and 3.

Grading of some carcinomas is lineage specific, for example serous carcinoma is by convention high grade.14
Undifferentiated carcinoma is a tumour with no differentiating features, or having only very small foci of discernible differentiation. Some authors designate these tumours as ‘grade 4’. It is suggested that the term undifferentiated be retained, with documentation of any differentiated component.

G3.02  Histological tumour grade for squamous cell carcinoma may be recorded.

CG3.02a  Squamous cell carcinoma has conventionally been graded. A variety of grading methods have been suggested based on growth pattern and degree of keratinisation. The current WHO classification suggests two possible approaches. It is however acknowledged that there is lack of consensus and reproducibility in grading of squamous cell carcinoma and that current grading systems may not provide prognostic information.4

S3.04  Microscopic tumour measurements must be made in millimetres.

CS3.04a  Descriptive terminology without clarification (by measurements in millimetres) regarding degree of invasion should be avoided.32

CS3.04b  The provision of actual measurements in millimetres avoids confusion with terminology.

Whilst there is no doubting the importance of identifying carcinomas which can be treated with less radical therapy, there has been no consensus regarding the size of such lesions and whether such terms apply to both squamous and adenocarcinomas.

Descriptive terminology which is commonly in use is provided for clarification in Appendix 6. In this document due to lack of uniform consensus on definitions, descriptive terminology is not used.

S3.05  The maximum microscopic depth of invasion of the most deeply invasive tumour must be recorded.25,33

CS3.05a  The depth of invasion has prognostic implications and defines stage 1A tumours and pre-clinical cancers of a higher stage.13

CS3.05b  Depth of invasion as defined by FIGO should be taken from the base of the epithelium of the original tissue – superficial or glandular.

Depth of invasion is measured from the basement membrane of the epithelium from which the tumour is considered to arise, to the deepest point of invasion.

The issue of depth of invasion is a problematic one in the cervix as identification of the epithelium of the original tissue may not be obvious. The issue is not resolved, however until consensus has been reached regarding a more optimal method we are following FIGO staging.3
The implication of depth of invasion would intuitively mean the degree of stromal invasion below an imaginary line from the adjacent normal tissue, and in the case of a largely exophytic tumour could potentially be a small measurement. However FIGO refers to the original tissue and if the epithelium from which the tumour arises cannot be identified then what is defined as depth of invasion also equates to tumour thickness.\(^\text{32}\) Whilst two measurements could be given in exophytic tumours this would be potentially confusing and we currently advocate retaining the term depth (which in some instances will equate to thickness).

For squamous cell carcinoma depth is measured from the basement membrane of the surface epithelium or from the basement membrane of a crypt involved by CIN, if this clearly the origin of the carcinoma. Refer to Figure 6a below.

For adenocarcinoma the epithelium from which the tumour arises may be the surface epithelium or a deeper endocervical gland. In practice for many adenocarcinomas it is difficult to establish the gland of origin and invasive depth is by convention measured from the nearest surface epithelium, which equates to tumour thickness.\(^\text{14,34}\) Refer to Figure 6b below.

CS3.05c If there is ulceration over the surface at the deepest point of invasion, measurement is from the ulcerated surface and this should be stated. (Ulceration is recorded at G3.04)

CS3.05d If the deepest point of invasion involves the margin of the specimen, comment should be made addressing the possibility of underestimation of the depth of invasion in the specimen (particularly applicable to cone biopsy and radical trachelectomy specimens).

CS3.05e In the case of multiple tumours, the individual depths of each lesion should be listed or a range provided.

G3.03 The thickness of the cervical wall in the maximal area of invasion should be documented.

CG3.03a Some studies show a relationship between survival and the degree of cervical wall invasion with stage 1 adenocarcinoma. The thickness of the remaining (uninvolved) cervical wall also appears significant.\(^\text{4}\)

As described in S2.07, some institutions use the fractional measurement of invasive depth (numerator)/cervical wall thickness (denominator) as a component to calculate the GOG score.\(^\text{25}\)

There is not a clear consensus with regard to where the measurement of the cervical wall thickness should originate. We suggest the measurement is taken from the same point from which tumour depth is measured, through the wall (refer to Figure 4).
G3.04 The presence or absence of ulceration of a tumour should be recorded.

CG3.04a If ulceration is present it could interfere with the ability to accurately measure depth of invasion (refer to S3.05).

S3.06 The greatest microscopic size of the carcinoma must be recorded as a horizontal (transverse) dimension.

CS3.06a The greatest horizontal measurement may be able to be directly measured from the slide, however may require calculation from the number of blocks involved and thickness of the involved blocks. (Refer to Figure 6a). Whilst it is acknowledged that measurements from calculating block thickness may be inaccurate, it will in some cases be the only way to identify the greatest tumour dimension and may effect stage in preclinical tumours.35

CS3.06b In the case of multiple tumours with apparent separate individual points of origin, each tumour should be documented as a separate focus and measured accordingly. The total expanse of all the separate invasive foci are not combined as this may falsely elevate early stage tumours.

On the other hand a tumour with dispersed growth pattern is measured as one lesion.

If there is considerable doubt as to whether a tumour is indeed one focus with an unusually dispersed growth pattern or truly multiple individual tumour foci this should be expressed in the pathological report, with specification as to how the final measurement was obtained and discussed in a multidisciplinary setting.

CS3.06c If the tumour involves the margins of the specimen comment should be made addressing the possibility of underestimation of the tumour size in the specimen.

G3.05 Measurement of a second horizontal (transverse) dimension of the carcinoma should be recorded.

CG3.05a The second horizontal measurement may be directly measured from the slide, however may require calculation based on the thickness of the individual involved blocks.

CG3.05b Tumour volume has prognostic and management implications. Providing a second dimension gives a better impression of volume than one dimension.36-37

Low volume tumours (under 500mm$^3$ as defined by several authors)36,39 are associated with a low rate of pelvic lymph node metastasis. FIGO stage 1A tumours are low volume, and formal calculation of tumour volume is not typically required. If clinically requested, standard published method of calculating tumour volume in mm$^3$ is:

depth (or thickness if exophytic) x maximal horizontal size x
(1.5 times the largest measured depth or horizontal size).\textsuperscript{40}

For example, in figure 6b, the volume of tumour 2 would be calculated as: volume (mm$^3$) = b (mm) x e (mm) x (1.5 x b)

In the case of residual carcinoma present in a hysterectomy specimen following LLETZ or cone biopsy the tumour measurements and depth of invasion are given as pertaining to the hysterectomy specimen and are not combined in the report with the previous tumour measurement. The final parameters for these cases are determined in a multidisciplinary setting.
**Figure 6a**  Example of depth of invasion and horizontal size measurements for squamous cell carcinoma including multifocal tumours.

**Block 1**

The diagram shows two consecutive blocks of cervix. The largest tumour (1) has a depth of invasion of (a), a horizontal measurement of (b) x approximately 2x(c) (as two consecutive blocks are involved by tumour). There are two other apparently separate smaller foci of invasion (2) and (3), which measure (e) and (g) in maximal dimension, with depth of invasion of (d) and (f) respectively. Note tumour 2 arises from vertically orientated epithelium and the depth of invasion is measured from the basement membrane of origin.
Figure 6b  Measurement of depth of invasion for adenocarcinoma.

The examples show tumour depth of invasion (tumours 1-5 have depths of invasion of a-e respectively). If the point of invasion from the glandular epithelium is clearly identifiable, (tumours 2 and 5) then measurement is from the basement membrane of tumour origin, to deepest point of invasion. In tumour 1 the point of origin is not identifiable, so depth is measured from the overlying basement membrane. Tumour 3 has an ulcerated surface, so depth is equal to thickness (denoted by measurement 'c').

G3.06  The site of the tumour(s) should be recorded.

   CG3.06a  Descriptive terminology is acceptable, for example anterior or posterior lip of cervix and / or the approximate position in the canal.

   Documentation of site allows for audit and correlation with radiological, clinical and colposcopic findings.

   In the setting of multiple tumours, documentation of site may aid in defining each lesion.

S3.07  The presence of an associated CIN component must be recorded.

S3.08  The presence of an associated AIS component must be recorded.

S3.09  Involvement of other organs must be documented.

   CS3.09a  The following sites may be important for prognostic and therapeutic reasons and documentation enables correlation with clinical staging:
   
   - pelvic wall
   - vagina (specify upper two thirds or lower third)
   - mucosa of bladder or rectum
   - other (specify)

   CS3.09b  Uterine body involvement by cervical carcinoma has prognostic significance and must also be recorded.4,26

S3.10  The presence or absence of vascular invasion must be recorded.
CS3.10a Lymphatic and blood vessel invasion are prognostic variables, particularly for disease free and overall survival and may have implications for further therapy.4,36-37

CS3.10b Assessment of lymphatic and blood vessel invasion may be subjective and issues such as retraction artefact may hinder accurate assessment. In cases of uncertainty the reason for uncertainty should be stated.

CS3.10c Use of immunohistochemical markers to stain vascular endothelium may be beneficial in uncertain cases.37 If blood vessel or lymphatic invasion is identified only with immunohistochemical studies, this should be documented.

G3.07 The type of vessel involved (lymphatic or blood vessel) should be stated if known.

CG3.07a Blood vessels invasion may be a risk factor for ovarian metastasis.41

G3.08 The extent of lymphatic and vascular spaces involvement should be recorded.

CG3.08a Increased numbers of vessels involved by carcinoma may correlate with recurrence, however studies (which have varied in methodology), have not found this to be a universal finding.42-43

Whilst documentation of the actual numbers of involved vessels would be encouraged in straightforward cases, in the absence of established literature semiquantative expression or descriptive terminology such as focal or extensive may be employed.

S3.11 Measurement of the margins for invasive carcinoma must be recorded.

CS3.11a The microscopic status of carcinoma margins has prognostic and management implications.

CS3.11b The specific relevant margins are specimen dependant:

**Cone biopsy**
- endocervical (apical)
- ectocervical
- radial stromal

**Radical trachelectomy specimens**
- endocervical (superior)
- vaginal cuff
- radial stromal

**Hysterectomy specimens**
- inferior margin (vaginal or cervical)
• radial stromal

S3.12 Status of margins of an associated CIN component must be recorded.

CS3.12a The status of the margin (involved or not involved) for CIN may influence further therapy particularly in cervical cone specimens.

G3.09 The distance from the closest uninvolved margins for an associated CIN component should be recorded.

S3.13 Status of margins of an associated AIS component must be recorded.

CS3.13a The status of the margin (involved or not involved) for AIS may influence further therapy particularly in cervical cone specimens.

G3.10 The distance from the closest uninvolved margins for an associated AIS component should be recorded.

S3.14 The status of parametrial involvement (involved or not involved) must be recorded.

G3.11 The nature of any parametrial involvement should be recorded.

CG3.11a This may be vascular or soft tissue. In the case of parametrial nodal disease this is documented as such in the subsequent section.

CG3.11b Parametrial involvement is a poor prognostic factor.44

S3.15 The number of regional lymph nodes identified at each site and the number of regional lymph nodes involved for each site must be recorded.

CS3.15a The site (including laterality) and number of sites involved by lymph node metastases is prognostically significant. This should be recorded for each of regional lymph node sites submitted. Regional nodes include13:

• parametrial
• obturator
• internal iliac
• external iliac
• common iliac
• sacral
• presacral

Nodes outside the regional group are considered distant metastasis.

G3.12 The greatest dimension of the largest nodal metastatic deposit should be documented.
CG3.12a In cases of small clusters of tumour cells the size of the focus should be measured. It is preferable to include the actual measurement of the deposit as the relevance of small metastatic foci is not yet established. Documentation would allow for further study in this area.

CG3.12b In the case of isolated tumour cells there is no evidence to guide appropriate management. Discussion in a multidisciplinary setting is recommended in individual cases.

G3.13 Extranodal extension is defined as tumour cells beyond the nodal capsule and should be recorded and measured in millimetres as the distance from the capsule.

CG3.13a There is limited literature in the cervix regarding extranodal extension, however at least one large study shows extranodal extension to be an independent prognostic factor associated with frequency of recurrence and decreased overall survival.45

G3.14 Any additional relevant microscopic comments should be recorded.
4 Ancillary studies findings

G4.01 The results of ancillary studies performed in the work up of cervical carcinoma for diagnostic or prognostic purposes should be documented.

CG4.01a Diagnosis of most cervical carcinomas does not require ancillary studies, however if performed these results should be documented.

CG4.01b Immunohistochemical studies may be useful in the following settings:

- to assist in classification, in particular to confirm neuroendocrine differentiation
- to confirm the presence of lymphatic or blood vessel invasion
- to establish the site of an invasive carcinoma (endometrial v’s endocervical origin). This is typically more problematic in smaller biopsy specimens, however a panel of antibodies addressing this issue may be contributory for cases when the carcinoma is present in an equivocal site (eg isthmic region) with indeterminate morphology and no precursor lesion.\textsuperscript{46}

G4.02 Results of molecular studies for HPV typing should be recorded if performed.

CG4.02a For epidemiological purposes and assessment of the utility of HPV vaccination, it is important to record the genotype(s) of HPV which contribute to cervical carcinoma.
5 Synthesis and overview

Information that is synthesized from multiple modalities and therefore cannot reside solely in any one of the preceding chapters is described here.

Overarching case comment is synthesis in narrative form. Although it may not necessarily be required in any given report, the provision of the facility for overarching commentary in a cancer report is essential.

By definition, synthetic elements are inferential rather than observational, often representing high-level information that is likely to form part of the ‘diagnostic summary’ section in the final formatted report.

G5.01 FIGO staging forms the basis for management decisions in Australia and New Zealand and formal pathological staging for example using the TNM system is not encouraged.

CG5.01a Cervical carcinoma is the only gynaecological carcinoma that remains primarily clinically staged. In cases treated by surgery the pathological data provides information regarding the extent of disease and other variables which may influence management, but does not alter the clinical stage.

Stage 1A tumours are invasive carcinomas diagnosed by microscopy only. All macroscopically identifiable tumours belong to a higher stage category.

Whilst it is implicit that pathologists provide all the pathological variables required for staging of preclinical cancers, pathological staging with pTNM is not encouraged as this may cause confusion and lead to incorrect staging data to be collected.

G5.02 The ‘diagnostic summary’ section of the final formatted report should include:

- histological type
- differentiation if adenocarcinoma
- depth of invasion
- tumour size
- margin assessment
- blood vessel or lymphatic invasion if present
- parametrial involvement if present
- involvement of other organs if present
- number of nodal metastases, out of total number of lymph nodes present

S5.01 The reporting system must allow for a field for free text or narrative in which the reporting pathologist can give overarching case comment.
This field may be used, for example, to:

- discuss the significance of ancillary tests
- discuss any noteworthy prognostic features
- express any diagnostic subtlety or nuance that is beyond synoptic capture
- document further consultation or results still pending.

Use of this field is at the discretion of the reporting pathologist.
6 Structured checklist

The following checklist includes the standards and guidelines for this protocol which must be considered when reporting, in the simplest possible form. The summation of all ‘Standards’ is equivalent to the ‘minimum dataset’ for cervical cancer. For emphasis, standards (mandatory elements) are formatted in bold font.

S6.01 The structured checklist provided may be modified as required but with the following restrictions:

a. All standards and their respective naming conventions, definitions and value lists must be adhered to.

b. Guidelines are not mandatory but are recommendations and where used, must follow the naming conventions, definitions and value lists given in the protocol.

G6.01 The order of information and design of the checklist may be varied according to the laboratory information system (LIS) capabilities and as described in Functional Requirements for Structured Pathology Reporting of Cancer Protocols.47

CG6.01a Where the LIS allows dissociation between data entry and report format, the structured checklist is usually best formatted to follow pathologist workflow. In this situation, the elements of synthesis or conclusions are necessarily at the end. The report format is then optimised independently by the LIS.

CG6.01b Where the LIS does not allow dissociation between data entry and report format, (for example where only a single text field is provided for the report), pathologists may elect to create a checklist in the format of the final report. In this situation, communication with the clinician takes precedence and the checklist design is according to principles given in Chapter 7.

G6.02 Where the checklist is used as a report template (see G6.01), the principles in Chapter 7 and Appendix 2 apply.

CG6.02a All extraneous information, tick boxes and unused values should be deleted.

G6.03 Additional comment may be added to an individual response where necessary to describe any uncertainty or nuance in the selection of a prescribed response in the checklist. Additional comment is not required where the prescribed response is adequate.
Values in italics are conditional on previous responses.

Values in all caps are headings with sub values.

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### Macroscopic findings

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<tr>
<th>S2.04</th>
<th>SPECIMEN MEASUREMENTS</th>
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- **Length of specimen**  
  Numeric: ____mm  
  Conditional on this being a cone biopsy or radical trachelectomy specimen.

- **Length of canal**  
  Numeric: ____mm  
  Conditional on this being a cone biopsy or radical trachelectomy specimen.

- **Diameter of ectocervix in 3-9 o’clock plane**  
  Numeric: ____mm  
  Conditional on this being a cone biopsy or radical trachelectomy specimen.

- **Diameter of ectocervix in 6-12 o’clock plane**  
  Numeric: ____mm  
  Conditional on this being a cone biopsy or radical trachelectomy specimen.

- **Uterine dimensions**  
  Numeric: __x__x__mm  
  Notes:  
  superior to inferior x distance between cornu x anterior to posterior  
  Conditional on this being a hysterectomy or radical hysterectomy specimen.
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| **S2.05** Macroscopically visible tumour | **Single selection value list:**  
  - Present  
  - Absent |
| **If present, describe and record the number of visible tumours.** |
| **Describe** | **Text** |
| **Number of visible tumours** | **Numeric: _____** |
| **G2.03** Tumour location within ectocervix/endocervix plane | **Text**  
  *Note:* that the tumour location will need to be repeated for each tumour identified in S2.05. |
| **Conditional on S2.05 being present.** |
| **Tumour location radially (clock-face)** | **Text**  
  *Note:* that the tumour location will need to be repeated for each tumour identified in S2.05. |
| **Conditional on S2.05 being present.** |
| **S2.06** Tumour size | **Numeric: ___x__mm**  
  *Notes:*  
  length x width in mucosal surface area  
  *Note:* that the tumour size will need to be repeated for each tumour identified in S2.05. |
| **Conditional on S2.05 being present.** |
| **G2.04** Tumour appearance | **Text**  
  *Note:* that the appearance will need to be repeated for each tumour identified in S2.05. |
| **Conditional on S2.05 being present.** |
| S2.07 | Tumour thickness | Numeric: ____mm out of ___mm  
Note: Record thickness from the tumour surface to deepest point of invasion out of the total cervical wall thickness in this region  
Note: that the tumour thickness /total cervical wall thickness will need to be repeated for each tumour identified in S2.05. | Conditional on S2.05 being present. |
| S2.08 | Closest distance of tumour to resection margin | Numeric: ____mm  
Note: that the closest distance of tumour to the resection margin will need to be repeated for each tumour identified in S2.05. | Conditional on S2.05 being present. |
| G2.05 | Distance between tumours | Text | Conditional on >1 tumour being recorded in S2.05 |
|       | Outermost span of tumours | Numeric: ____mm | Conditional on >1 tumour being recorded in S2.05 |
| S2.09 | Macroscopic invasion | Multi select value list (select all that apply):  
- Vaginal cuff  
- Uterine body  
- Parametrium  
- Other organs or tissues | Conditional on S2.05 being present.  
If other organs or tissues, record details. |
|       | Details | Text |
| S2.10 | Nature and site of blocks | Text |
| S2.11 | Lymph nodes | Single selection value list:  
- Not submitted  
- Submitted | If submitted, record the sites and number of nodes. |
| **Site(s) (including laterality) and number of nodes** | **Text:** site/laterality AND **Numeric:** Number of LN’s for each site AND **Single selection value list:**  
- Macroscopically does not appear involved  
- Macroscopically appears involved  
**Notes:**  
Note that the site, number of nodes for that site and involvement for that site will need to be repeated for each site received. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G2.06</strong> Other macroscopic description</td>
<td><strong>Text</strong></td>
</tr>
<tr>
<td><strong>Microscopic findings</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **S3.01** Multiple tumours | **Single selection value list:**  
- Absent  
- Present  
**If present, record the number of tumours.** |
<p>| <strong>Number of tumours</strong> | <strong>Numeric:</strong> ____ |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Field Description</th>
<th>Value List</th>
<th>Conditional on</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3.02</td>
<td>Histological tumour type</td>
<td>Multi select value list from WHO Classification of Tumours. Pathology and Genetics of Tumours of the Breast and Female Genital Organs (2003). (Choose all that apply)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Notes:</td>
<td></td>
<td>Note that this will need to be repeated for each tumour identified in S3.01</td>
</tr>
<tr>
<td>G3.01</td>
<td>Carcinoma subtype</td>
<td>Single selection value list from WHO Classification of Tumours. Pathology and Genetics of Tumours of the Breast and Female Genital Organs (2003).</td>
<td></td>
</tr>
</tbody>
</table>
| S3.03   | Histological tumour grade - adenocarcinoma | Single selection value list:  
- Well differentiated (grade 1)  
- Moderately differentiated (grade 2)  
- Poorly differentiated (grade 3) | Conditional on adenocarcinoma being selected in S3.02.  |
|         | Notes: | | Note that this may need to be repeated for each tumour identified in S3.01  |
| G3.02   | Histological tumour grade - SCC | Text | Conditional on Squamous cell carcinoma being selected in S3.02.  |
| S3.05   | Maximum microscopic depth of invasion (most deeply invasive focus) | Numeric: ____mm  
OR  
Numeric: at least ____mm, the deepest point of invasion involves a margin. |  |
| **Depths of invasion of additional tumours** | **Numeric:** ____mm  
**OR**  
**Numeric:** ____mm to ___mm |
|---|---|
| **Note:** The measure should be for each tumour or a range of depths can be recorded for all additional tumours.  
Conditional on multiple tumours being recorded in S3.01. |
| **G3.03**  
**Cervical wall thickness** | **Numeric:** ____mm  
**Note:** In the maximal area of invasion |
| **G3.04**  
**Ulceration** | **Single selection value list:**  
• Absent  
• Present |
| **G3.05**  
**Second horizontal (transverse) measurement of carcinoma** | **Numeric:** ____mm  
**Note:** if there are multiple foci of invasion with clearly separate individual points of origin, then separate measurements should be made and each tumour documented as a separate focus. |
| **G3.06**  
**Tumour site(s)** | **Text** |
| **S3.07**  
**Associated CIN** | **Single selection value list:**  
• Present  
• Absent |
**S3.08**  
**Associated AIS**  
**Single selection value list:**  
- Present  
- Absent

**S3.09**  
**Involvement of other organs**  
**Multi select value list (select all that apply):**  
- Not applicable  
- Pelvic wall  
- Vagina - upper two thirds  
- Vagina - lower third  
- Mucosa of bladder  
- Mucosa of rectum  
- Uterine body  
- Other organs or tissues  

**Details**  
**Text**

**S3.10**  
**Vascular invasion**  
**Single selection value list:**  
- Not identified  
- Present  

**G3.07**  
**Type of vessel involved**  
**Multi select value list (select all that apply):**  
- Lymphatic  
- Blood vessel

**G3.08**  
**Number of lymphatic spaces involved**  
**Numeric:**  ____  
Conditional on lymphatic being recorded in G3.07.

**Number of vascular spaces involved**  
**Numeric:**  ____  
Conditional on vascular being recorded in G3.07.
<table>
<thead>
<tr>
<th><strong>S3.11</strong></th>
<th><strong>MARGIN STATUS – INVASIVE COMPONENT</strong></th>
</tr>
</thead>
</table>
| **Endocervical (apical or superior) margin** | **Single selection value list:**
- Not involved
- Involved |
|  | **Apical conditional on cone biopsy specimen, superior conditional on radical trachelectomy.**
|  | **If not involved record the closest distance of tumour to this margin.** |
| **Closest distance of tumour to this margin** | **Numeric: ___mm** |
| **Ectocervical or vaginal cuff margin** | **Single selection value list:**
- Not involved
- Involved |
|  | **If not involved record the closest distance of tumour to this margin.** |
| **Closest distance of tumour to this margin** | **Numeric: ___mm** |
| **Radial stromal margin** | **Single selection value list:**
- Not involved
- Involved |
|  | **If not involved record the closest distance of tumour to this margin.** |
| **Closest distance of tumour to this margin** | **Numeric: ___mm** |
| **S3.12** | **Margin status - CIN** |
|  | **Single selection value list:**
- Not involved
- Involved |
|  | **Conditional on CIN being recorded in S3.07 above.**
<p>|  | <strong>If involved, record which</strong> |</p>
<table>
<thead>
<tr>
<th>Margin(s) involved</th>
<th>Text</th>
<th>G3.09 Closest distance of CIN to this margin Numeric: ___mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3.13 Margin status - AIS</td>
<td>Single selection value list:</td>
<td>Conditional on AIS being recorded in S3.08 above. If involved, record which margin(s) involved. If not involved consider recording G3.10.</td>
</tr>
<tr>
<td></td>
<td>• Not involved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Involved</td>
<td></td>
</tr>
<tr>
<td>Margin(s) involved</td>
<td>Text</td>
<td>G3.10 Closest distance of AIS to this margin Numeric: ___mm</td>
</tr>
<tr>
<td>S3.14 Parametrium</td>
<td>Single selection value list:</td>
<td>If involved consider recording G3.11.</td>
</tr>
<tr>
<td></td>
<td>• Not applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Not involved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Involved</td>
<td></td>
</tr>
<tr>
<td>G3.11 Nature of parametrial involvement</td>
<td>Multi select value list (select all that apply):</td>
<td>Conditional on S3.14.</td>
</tr>
<tr>
<td></td>
<td>• Soft tissue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vascular</td>
<td></td>
</tr>
<tr>
<td>S3.15</td>
<td>REGIONAL LYMPH NODE STATUS</td>
<td>Conditional on lymph nodes and specific sites being recorded in S2.11.</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Site(s)(including laterality) and whether involved | **Text**: site/laterality  
**AND**  
**Single selection value list:**  
- Not involved  
- Involved | If involved, record the number of involved nodes |
| Notes: | Note that the site (including laterality) and whether involved will need to be repeated for each site received. |
| Number of involved nodes | **Numeric**: ____ /____ | |
| Notes: | Number of involved nodes /Total number of nodes resected at this site |
| Notes: | Note that the number of involved nodes/total number of resected nodes will need to be repeated for each site with involved nodes. |
| G3.12 | Largest nodal metastatic deposit | **Numeric**: ____mm |
| | Conditional on lymph nodes being recorded in S2.11. |
| G3.13  | **Extranodal extension** | **Single selection value list:**  
• Absent  
• Present | **Conditional on lymph nodes being recorded in S2.11.**  
If present, record the greatest dimension from the capsule. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Greatest dimension from capsule</strong></td>
<td><strong>Numeric: ____mm</strong></td>
</tr>
<tr>
<td>G3.14</td>
<td><strong>Additional microscopic comment</strong></td>
<td><strong>Text</strong></td>
</tr>
</tbody>
</table>

**Ancillary test findings**

| G4.01  | **Immunohistochemistry** | **Single selection value list:**  
• Not performed  
• Performed  
• Pending | **If performed, record the results and interpretive comment** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Results</strong></td>
<td><strong>Text</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Interpretive comment</strong></td>
<td><strong>Text</strong></td>
</tr>
</tbody>
</table>
| Other ancillary tests | **Single selection value list:**  
• Not performed  
• Performed  
• Pending | **If performed, record the test result type(s), result(s) and interpretive comment(s).** |
|        | **Test result type** | **Text**  
*Note: Test result type, result and interpretive comment will need to repeat for each other ancillary test performed.* |
<table>
<thead>
<tr>
<th>Result</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note:</td>
<td>Test result type, result and interpretive comment will need to repeat for each other ancillary test performed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interpretive comment</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note:</td>
<td>Test result type, result and interpretive comment will need to repeat for each other ancillary test performed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G4.02</th>
<th>HPV typing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td></td>
</tr>
</tbody>
</table>

## Synthesis and overview

<table>
<thead>
<tr>
<th>G5.01</th>
<th>Diagnostic summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include:</td>
<td></td>
</tr>
<tr>
<td>a. histological type</td>
<td>Text</td>
</tr>
<tr>
<td>b. differentiation if adenocarcinoma</td>
<td></td>
</tr>
<tr>
<td>a. depth of invasion</td>
<td></td>
</tr>
<tr>
<td>b. tumour size</td>
<td></td>
</tr>
<tr>
<td>c. margin assessment</td>
<td></td>
</tr>
<tr>
<td>d. blood vessel or lymphatic invasion if present</td>
<td></td>
</tr>
<tr>
<td>e. parametrial involvement if present</td>
<td></td>
</tr>
<tr>
<td>f. involvement of other organs if present</td>
<td></td>
</tr>
<tr>
<td>g. number of nodal metastases,</td>
<td></td>
</tr>
<tr>
<td>Text</td>
<td></td>
</tr>
<tr>
<td>S5.01</td>
<td><strong>Overarching comment</strong> (if applicable)</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------</td>
</tr>
</tbody>
</table>

out of total number of lymph nodes present
7 Formatting of pathology reports

Good formatting of the pathology report is essential to optimise communication with the clinician, and will be an important contributor to the success of cancer reporting protocols. The report should be formatted to provide information clearly and unambiguously to the treating doctors, and should be organised with their use of the report in mind. In this sense, the report differs from the structured checklist, which is organised with the pathologists’ workflow as a priority.

Uniformity in the format as well as in the data items of cancer reports between laboratories makes it easier for treating doctors to understand the reports; it is therefore seen as an important element of the systematic reporting of cancer.

Please see Appendix 2 for further guidance.
Appendix 1  Pathology request information and surgical handling procedures

This appendix describes the information that should be provided by the clinician prior to pathological examination.

Some of this information can be provided on generic pathology request forms; any additional information required specifically for the reporting of cervical cancer may be provided by the clinician on a separate request information sheet. An example request information sheet is included below. Elements which are in bold text are those which pathologists consider to be required information. Those in non-bold text are recommended.

Also included in this appendix are the procedures that are recommended before handover of specimens to the laboratory.

Patient information

- **Adequate demographic and request information should be provided with the specimen.**
  - Items relevant to cancer reporting protocols include:
    - i  patient name
    - ii date of birth
    - iii sex
    - iv identification and contact details of requesting doctor
    - v date of request
  - The patient's ethnicity should be recorded, if known. In particular whether the patient is of aboriginal or Torres Strait islander origin. This is in support of a government initiative to monitor the health of indigenous Australians particularly in relation to cancer.

- The patient's health identifiers should be provided.
  - The patient's health identifiers may include the patient’s Medical Record Number as well as a national health number such as a patient’s Medicare number (Australia), Individual Healthcare Identifier (IHI) (Australia) or the National Healthcare Identifier (New Zealand).

Clinical Information

- The tumour location should be recorded.
• Site is an important identifier, and necessary in correlation with colposcopic and biopsy findings.
• In the cervix, this is usually communicated with a clock-face analogy.
• If the tumour is known to be present in the endocervical canal, this should be stated as this may modify macroscopic handling.

➢ The type of operation or procedure should be recorded.

• Choose from one of the following:
  • Cone biopsy (laser cone or cold knife cone biopsy)
  • Radical trachelectomy
  • Hysterectomy
  • Radical hysterectomy
  • Other (please specify)

Additional specimens submitted should be recorded and may include the following:
  • Lymph nodes
  • Other (please specify)

➢ The clinical working diagnosis (including colposcopic findings) should be recorded.

• Cervical carcinoma is clinically staged.\(^1\),\(^4\)\(8\)

➢ Results of previous biopsy or cytology results should be recorded.

• Carcinoma of the cervix may be pleomorphic with respect to tumour morphology/subtype and grade. Correlation with prior results is important to ensure that the final classification and grade most accurately reflect the true biology of the tumour.\(^3\)\(0\),\(^4\)\(9\)

➢ Record if this is a new primary cancer or a recurrence of a previous cancer, if known.

• The term recurrence defines the return, reappearance or metastasis of cancer (of the same histology) after a disease free period.

Recurrence should be classified as distant metastases or regional (local) recurrence.

Regional (local) recurrence refers to the recurrence of cancer cells at the same site as the original (primary) tumour or the regional lymph nodes.

Distant metastasis refers to the spread of cancer of the same histologic type as the original (primary) tumour to distant
organs or distant lymph nodes.

- This information will provide an opportunity for previous reports to be reviewed during the reporting process, which may provide valuable information to the pathologist. This information also has implications for recording cancer incidence and evidence based research.

- The details of any previous remote or recent treatment should be recorded.
- Previous treatment may alter current appearances.

- Relevant details of any additional prior cancer diagnosis should be recorded.

  - Information regarding prior malignancies should be recorded. If necessary, review of the previous specimens may assist in resolving the origin of the current tumour.
  - Cervical involvement by tumours from another primary site (either from female genital tract or elsewhere) may closely mimic primary cervical carcinoma.
  - Knowledge of the patient’s cancer history may be informative in selection of immunohistochemistry.

- Details of any relevant family history should be recorded.

- **The surgeon’s opinion on the existence of local residual cancer following the operative procedure should be recorded.**

  - This item relates to the overall completeness of resection of the tumour, including evidence of residual disease at surgical margins or within regions in which resection has not been attempted.

Any additional relevant information should be recorded.

- There should be a free text field so that the referring doctor can add any additional relevant information.

### Surgical handling

- **The specimen must be capable of orientation if the status of specific surgical margins is critical in determining the need for, or extent of, further therapy.**

- For cone biopsy and radical trachelectomy, it is customary to mark the 12 o’clock position with a single long suture.

  - In addition, an accompanying diagram, or attachment of additional, clearly designated suture(s) may be used to draw attention to a particular area that requires careful examination.
Surgical specimens should be sent fresh where possible.

- Radical surgical specimens should be sent fresh unless there is an over-riding reason not to do so.
- A cervical cone may be sent either in the fresh state, or formalin-fixed.
- If a specimen is to be sent fresh, the pathologist should be alerted, so the specimen can be handled promptly, and then formalin fixed without delay.
The above Request Information Sheet is published to the RCPA website.
Appendix 2  Guidelines for formatting of a pathology report

Layout

Headings and spaces should be used to indicate subsections of the report, and heading hierarchies should be used where the LIS allows it. Heading hierarchies may be defined by a combination of case, font size, style and, if necessary, indentation. Grouping like data elements under headings and using ‘white space’ assists in rapid transfer of information.50

Descriptive titles and headings should be consistent across the protocol, checklist and report.

When reporting on different tumour types, similar layout of headings and blocks of data should be used, and this layout should be maintained over time.

Consistent positioning speeds data transfer and, over time, may reduce the need for field descriptions or headings, thus reducing unnecessary information or ‘clutter’.

Within any given subsection, information density should be optimised to assist in data assimilation and recall.

• Configuring reports in such a way that they ‘chunk’ data elements into a single unit will help to improve recall for the clinician.50

• ‘Clutter’ should be reduced to a minimum.50 Thus, information that is not part of the protocol (eg billing information, Snomed codes, etc) should not appear on the reports or should be minimised.

• Injudicious use of formatting elements (eg too much bold, underlining or use of footnotes) also increases clutter and may distract the reader from the key information.

Where a structured report checklist is used as a template for the actual report, any values provided in the checklist but not applying to the case in question must be deleted from the formatted report.

Reports should be formatted with an understanding of the potential for the information to ‘mutate’ or be degraded as the report is transferred from the LIS to other health information systems.

As a report is transferred between systems:

• text characteristics such as font type, size, bold, italics and colour are often lost

• tables are likely to be corrupted as vertical alignment of text is lost when fixed font widths of the LIS are rendered as proportional fonts on screen or in print

• spaces, tabs and blank lines may be stripped from the report, disrupting the formatting

• supplementary reports may merge into the initial report.
Appendix 3  Example pathology report for cervical cancer

CERVICAL CANCER STRUCTURED REPORT

Diagnostic Summary

Cervical Cone Biopsy:  Adenocarcinoma, endocervical type; G2 moderately differentiated, depth of invasion 2.1mm, tumour size 8.0mm x 6.8mm (at least), involvement of the ectocervical and radial stromal margins, focal lymphatic invasion.

Supporting Information

CLINICAL

Operative procedure:  Cone biopsy
Previous biopsy or cytology results:  Adenocarcinoma in-situ. Previous Bx 26/4/12.
New primary or recurrence:  New primary cancer
Details of prior cancer diagnosis:  None noted
Family history:  None noted
Existence of local residual cancer:  Nil

MACROSCOPIC

Specimen labelled as:  Cone biopsy cervix
Orientation markers:  Stitch along one cervical lip designated 12 o'clock; 12 o'clock cervical lip margin inked blue, 6 o'clock black.
Specimen – external appearance:  Tan ectocervical mucosa which is focally irregular. The ovoid os is 8mm.

SPECIMEN MEASUREMENTS

- Length of specimen: 18mm
- Length of canal: 15mm
- Ectocervix in 3-9 o'clock plane: 21mm
- Ectocervix in 6-12 o'clock plane: 18mm

Macroscopically visible tumour: Absent

Nature and site of blocks: Specimen serially sectioned in the sagittal plane from 3 o'clock to 9 o'clock and submitted with 3 o'clock end piece in block (1.1) consecutively through to 9 o'clock end piece in block (1.7).

Lymph nodes: Not submitted
### MICROSCOPIC

**Tumour**

- **Multiple tumours:** Absent
- **Histological tumour type:** Adenocarcinoma
- **Carcinoma subtype:** Endocervical
- **Histological tumour grade:** Moderately differentiated (grade 2). There are predominantly well formed glandular structures with focal solid growth.
- **Max. microscopic depth of invasion:** 2.1mm (at least, due to positive margins)
- **Cervical wall thickness:** 8.5mm. Please note – cone biopsy
- **Ulceration:** Absent
- **Greatest horizontal measure of carcinoma:** 8.0mm (at least, due to positive margins)
- **2nd transverse measurement of carcinoma:** 6.8mm (at least, due to positive margins)
- **Tumour site(s):** Anteriorly right side
- **Associated AIS:** Present. In all blocks except for the most peripheral section left lateral (block 1.1).
- **Associated CIN:** Absent

**Extent**

- **Involvement of other organs:** Not applicable
- **Vascular invasion:** Present. 1 lymphatic space involved.
- **Parametrium:** Not applicable

**Margin status**

- **Invasive component -**
  - **Endocervical (apical) margin:** Not involved. 8mm clearance.
  - **Ectocervical margin:** Involved. At approximately 10-11 o’clock.
  - **Radial stromal margin:** Involved. Focally involved close to the ectocervical margin.
- **Margin status - AIS:** Involved. Ectocervical margin.
- **Margin status - CIN:** Not involved. No CIN.

**ANCILLARY TESTS**

Not performed

---

*Reported by Dr Sarah Nyugen*  
*Authorised 4/9/2012*
Appendix 4  WHO histological classification of tumours of the uterine cervix

Epithelial tumours
Squamous tumours and precursors
- Squamous cell carcinoma, not otherwise specified 8070/3
  - Keratinizing 8071/3
  - Non-keratinizing 8072/3
  - Basaloid 8083/3
  - Verrucous 8051/3
  - Warty 8051/3
  - Papillary 8052/3
  - Lymphoepithelioma-like 8082/3
  - Squamotransitional 8120/3
- Early invasive (microinvasive) squamous cell carcinoma 8076/3
- Squamous intraepithelial neoplasia
  - Cervical intraepithelial neoplasia (CIN) 3 / squamous cell carcinoma in situ 8070/2
- Benign squamous cell lesions
  - Condyloma acuminatum
  - Squamous papilloma 8052/0
  - Fibroepithelial polyp
Glandular tumours and precursors
- Adenocarcinoma 8140/3
  - Mucinous adenocarcinoma 8480/3
    - Endocervical 8482/3
    - Intestinal 8144/3
    - Signet-ring cell 8490/3
    - Minimal deviation 8480/3
    - Villoglandular 8262/3
  - Endometrioid adenocarcinoma 8380/3
  - Clear cell adenocarcinoma 8310/3
  - Serous adenocarcinoma 8441/3
  - Mesonephric adenocarcinoma 9110/3
- Early invasive adenocarcinoma 8140/3
- Adenocarcinoma in situ 8140/2
- Glandular dysplasia
- Benign glandular lesions
  - Müllerian papilloma
  - Endocervical polyp
Other epithelial tumours
- Adenosquamous carcinoma 8560/3
  - Glassy cell carcinoma variant 8015/3
- Adenoid cystic carcinoma 8200/3
- Adenoid basal carcinoma 8098/3
- Neuroendocrine tumours
  - Carcinoid 8240/3
  - Atypical carcinoid 8249/3
  - Small cell carcinoma 8041/3
  - Large cell neuroendocrine carcinoma 8013/3
- Undifferentiated carcinoma 8020/3

Mesenchymal tumours and tumour-like conditions
- Leiomyosarcoma 8890/3
<table>
<thead>
<tr>
<th>Tumour Type</th>
<th>ICD-O Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endometrioid stromal sarcoma, low grade</td>
<td>8931/3</td>
</tr>
<tr>
<td>Undifferentiated endocervical sarcoma</td>
<td>8805/3</td>
</tr>
<tr>
<td>Sarcoma botryoides</td>
<td>8910/3</td>
</tr>
<tr>
<td>Alveolar soft part sarcoma</td>
<td>9581/3</td>
</tr>
<tr>
<td>Angiosarcoma</td>
<td>9120/3</td>
</tr>
<tr>
<td>Malignant peripheral nerve sheath tumour</td>
<td>9540/3</td>
</tr>
<tr>
<td>Leiomyoma</td>
<td>8890/0</td>
</tr>
<tr>
<td>Genital rhabdomyoma</td>
<td>8905/0</td>
</tr>
<tr>
<td>Postoperative spindle cell nodule</td>
<td></td>
</tr>
</tbody>
</table>

**Mixed epithelial and mesenchymal tumours**
- Carcinosarcoma (malignant müllerian mixed tumour; metaplastic carcinoma) 8980/3
- Adenosarcoma 8933/3
- Wilms tumour 8960/3
- Adenofibroma 9013/0
- Adenomyoma 8932/0

**Melanocytic tumours**
- Malignant melanoma 8720/3
- Blue naevus 8780/0

**Miscellaneous tumours**
- Tumours of germ cell type
  - Yolk sac tumour 9071/3
  - Dermoid cyst 9084/0
  - Mature cystic teratoma 9080/0

**Lymphoid and haematopoietic tumours**
- Malignant lymphoma (specify type)
- Leukaemia (specify type)

**Secondary tumours**

1 Morphology code of the International Classification of Diseases for Oncology (ICD-O) and the Systematized Nomenclature of Medicine (http://snomed.org).

Behaviour is coded /0 for benign tumours, /2 for in situ carcinomas and grade 3 intraepithelial neoplasia, /3 for malignant tumours, and /1 for borderline or uncertain behaviour.

2 Intraepithelial neoplasia does not have a generic code in ICD-O. ICD-O codes are only available for lesions categorized as squamous intraepithelial neoplasia grade 3 (e.g. cervical intraepithelial neoplasia 3) = 8077/2, squamous cell carcinoma in situ = 8070/2, glandular intraepithelial neoplasia grade 3 = 8148/2 and adenocarcinoma in situ = 8140/2.

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Appendix 5  FIGO Cancer staging

**Carcinoma of the cervix uteri**

**Stage I**  The carcinoma is strictly confined to the cervix (extension to the corpus would be disregarded)

**IA**  Invasive carcinoma which can be diagnosed only by microscopy, with deepest invasion $\leq 5$ mm and largest extension $\leq 7$ mm

**IA1**  Measured stromal invasion of $\leq 3.0$ mm in depth and extension of $\leq 7.0$ mm

**IA2**  Measured stromal invasion of $>3.0$ mm and not $>5.0$ mm with an extension of not $>7.0$ mm

**IB**  Clinically visible lesions limited to the cervix uteri or pre-clinical cancers greater than stage IA *

**IB1**  Clinically visible lesion $\leq 4.0$ cm in greatest dimension

**IB2**  Clinically visible lesion $>4.0$ cm in greatest dimension

**Stage II**  Cervical carcinoma invades beyond the uterus, but not to the pelvic wall or to the lower third of the vagina

**IIA**  Without parametrial invasion

**IIA1**  Clinically visible lesion $\leq 4.0$ cm in greatest dimension

**IIA2**  Clinically visible lesion $>4$ cm in greatest dimension

**IIB**  With obvious parametrial invasion

**Stage III**  The tumor extends to the pelvic wall and/or involves lower third of the vagina and/or causes hydronephrosis or non-functioning kidney **

**IIIA**  Tumor involves lower third of the vagina, with no extension to the pelvic wall

**IIIB**  Extension to the pelvic wall and/or hydronephrosis or non-functioning kidney

**Stage IV**  The carcinoma has extended beyond the true pelvis or has involved (biopsy proven) the mucosa of the bladder or rectum. A bullous edema, as such, does not permit a case to be allotted to Stage IV

**IVA**  Spread of the growth to adjacent organs

**IVB**  Spread to distant organs

*All macroscopically visible lesions—even with superficial invasion—are allotted to stage IB carcinomas. Invasion is limited to a measured stromal invasion with a maximal depth of 5.00 mm and a horizontal extension of not $>7.00$ mm. Depth of invasion should not be $>5.00$ mm taken from the base of the epithelium of the original tissue—superficial or glandular. The depth of invasion should always be reported in mm, even in those cases with “early (minimal) stromal invasion” ($\sim 1$ mm). The involvement of vascular/lymphatic spaces should not change the stage allotment.

**On rectal examination, there is no cancer-free space between the tumor and the pelvic wall. All cases with hydronephrosis or non-functioning kidney are included, unless they are known to be due to another cause.**
Appendix 6 Descriptive terminology relating to extent of invasion in cervical carcinoma

Individualised treatment for cervical carcinoma is based on a number of variables including the extent of disease. Undoubtedly cervical carcinomas having lesser degrees of invasion need to be separated from those with more extensive disease. Whilst staging relates to extent of disease, a number of descriptive terms for carcinomas showing limited invasion are also in use. In certain institutions such terms may be frequently used and locally understood. Terminology is however not uniform and for this reason, in this document we suggest provision of actual measurements. The following commentary refers to descriptive terminology that may be in use and is provided for clarification purposes.

**Early stromal invasion** pertains to squamous lesions and is defined by WHO as an “unmeasurable” lesion, less than 1mm in depth. The term early stromal invasion may have some disadvantages, possibly falsely implying a temporal connotation. This term is used to describe epithelial buds arising from the base of CIN lesions. We recommend measuring such lesions, for example as fractions of a millimetre or simply “less than 1mm”. These cases remain in the most recent FIGO staging system for carcinoma of cervix as 1A1, and fall within the FIGO microinvasive category, however are considered by most as having a similar prognosis to an equivalent CIN lesion without early stromal invasion, and therefore should have similar therapy.

As defined by the WHO **early invasive squamous cell carcinoma** is “A squamous cell carcinoma with early stromal invasion, the extent of which has not been precisely defined, and a low risk of local lymph node metastasis.”

**Early invasive adenocarcinoma** is defined by the WHO as “a glandular neoplasm in which the extent of stromal invasion is so minimal that the risk of local lymph node metastasis is negligible.”

The term **microinvasive** has different connotations in different countries and is used for squamous cell carcinoma and adenocarcinoma. As defined by FIGO this term pertains to stage 1A lesions. The Society of Gynecologic Oncologists (SGO) developed a definition of microinvasive carcinoma of the cervix which was aimed to be a practical guide for treatment: An invasive tumour with stromal invasion (in >/= 1 areas) to a depth of 3mm or less below the base of the epithelium and in which lymphatic or vascular involvement is not demonstrated. The entire lesion, including associated CIN3 is excised and available for assessment. The SGO definition does not include an upper limit for horizontal tumour size.

The Lower Anogenital Squamous Terminology Standardization (LAST) Project for HPV-associated Lesions suggest the term **superficially invasive squamous cell carcinoma (SISCA)** for an invasive squamous carcinoma of the cervix that:

- Is not a grossly visible lesion, AND
- Has an invasive depth of </=3mm from the basement membrane of the point of origin, AND
- Has a horizontal spread on </=7mm in maximal extent, AND
- Has been completely excised.
References


11 RCPA (Royal College of Pathologists of Australasia) (2009). Guidelines for Authors of Structured Cancer Pathology Reporting Protocols. RCPA, Surry Hills, NSW.


